

AMENDMENTS TO THE CLAIMS

Please replace all prior versions, and listings, of claims in the application with the following list of claims, in which insertions are indicated by underlining and deletions are indicated by strikeouts or double bracketing.

1. (Currently amended) A method of ~~functionally treating for~~ repairing a nerve root ~~avulsion of a nerve root between the central system and the peripheral nervous system, or avulsion of the peripheral nervous system~~ in a living vertebrate, the method comprising

bringing ~~[[an]]~~ a first ~~avulsed end of the peripheral nervous and another avulsed end of the central nervous system at a nerve root, or an avulsed end and another avulsed end of the peripheral nervous system~~ and a second avulsed end close to each other~~[[,]]~~ without an intermediate graft, and

applying to the gap between the ~~[[two]]~~ first and second avulsed ends a fibrin glue mixture as the only active agent, the fibrin glue mixture comprising consisting of a growth factor, fibrinogen, aprotinin, and divalent calcium ions so that the fibrin glue mixture is simultaneously in contact with the two avulsed ends, ~~forming to form~~ an attachment between the avulsed ends, and suturing or anastomosing the two avulsed ends to be connected wherein the first avulsed end is in the peripheral or central nervous system and the second avulsed end is in the peripheral nervous system.

2. (Currently amended) The method of claim 1, wherein the first avulsed end ~~[[of]]~~ is in the peripheral nervous system ~~is connected to the other~~ and the second avulsed end ~~[[of]]~~ is in the central nervous system at a nerve root.

3. (Original) The method of claim 1, wherein the growth factor is selected from the group consisting of a glial cell line-derived neurotrophic factor, transforming growth factor-beta, fibroblast growth factor, platelet-derived growth factor and epidermal growth factor, vascular endothelial growth factor, and neurotrophin.

4. (Original) The method of claim 1, wherein the components of the fibrin glue mixture can be applied to the gap simultaneously or separately.

5. (Original) The method of claim 3, wherein the growth factor is fibroblast growth factor, which is acidic or basic fibroblast growth factor.

6. (Original) The method of claim 5, wherein the fibroblast growth factor is acidic fibroblast growth factor.

7. (Original) The method of claim 1, wherein the divalent calcium ions are provided by the addition of calcium chloride or calcium carbonate.

8. (Currently amended) The method of claim 1, wherein the fibrin glue mixture ~~comprises~~ consists of fibroblast growth factor, fibrinogen, aprotinin, and calcium chloride.

9. (Currently amended) The method of claim 1, wherein the fibrin glue mixture ~~comprises~~ consists of acidic fibroblast growth factor, fibrinogen, aprotinin and calcium chloride.

10. (Currently amended) The method of claim 9, wherein the fibrin glue mixture ~~comprises~~ consists of 0.0001-1000 mg/ml of fibroblast growth factor, 10-1000 mg/ml of fibrinogen, 10-500 KIU/ml of aprotinin, and 1-100 mM of calcium chloride.

11. (Currently amended) The method of claim 10, wherein the fibrin glue mixture ~~comprises~~ consists of 1 mg/ml of fibroblast growth factor, 100 mg/ml of fibrinogen, 200 KIU/ml of aprotinin, and 8 mM of calcium chloride.

12. (Currently amended) A method of ~~functionally~~ reconnecting an avulsed end of a cervical root to an avulsed end of the spinal cord ~~to be connected~~ in a vertebrate, comprising bringing the avulsed end of the cervical root close to the avulsed end of the spinal cord~~[[,]]~~without an intermediate graft, and applying to the gap between the two avulsed ends a fibrin glue mixture as the only active agent, the fibrin glue mixture comprising consisting of a growth factor, fibrinogen, aprotinin, and divalent calcium ions so that the fibrin glue mixture is simultaneously in contact with the avulsed end of the cervical root and avulsed end of the spinal cord, ~~and forming~~ to form an attachment between the cervical root and the spinal cord of said vertebrate.

13. (Original) The method of claim 12, wherein the growth factor is selected from the group consisting of a glial cell line-derived neurotrophic factor, transforming growth factor-beta, fibroblast growth factor, platelet-derived growth factor and epidermal growth factor, vascular endothelial growth factor, and neurotrophin.

14. (Original) The method of claim 12, wherein the components of the fibrin glue mixture can be applied to the gap simultaneously or separately.

15. (Original) The method of claim 13, wherein the growth factor is fibroblast growth factor, which is acidic or basic fibroblast growth factor.

16. (Original) The method of claim 15, wherein the fibroblast growth factor is acidic fibroblast growth factor.

17. (Original) The method of claim 12, wherein the divalent calcium ions are provided by the addition of calcium chloride or calcium carbonate.

18. (Currently amended) The method of claim 12, wherein the fibrin glue mixture ~~comprises~~ consists of fibroblast growth factor, fibrinogen, aprotinin, and calcium chloride.

19. (Currently amended) The method of claim 12, wherein the fibrin glue mixture ~~comprises~~ consists of acidic fibroblast growth factor, fibrinogen, aprotinin, and calcium chloride.

20. (Currently amended) The method of claim 19, wherein the fibrin glue mixture ~~comprises~~ consists of 0.0001-1000 mg/ml of fibroblast growth factor, 10-1000 mg/ml of fibrinogen, 10-500 KIU/ml of aprotinin, and 1-100 mM of calcium chloride.

21. (Currently amended) The method of claim 20, wherein the fibrin glue mixture ~~comprises~~ consists of 1 mg/ml of fibroblast growth factor, 100 mg/ml of fibrinogen, 200 KIU/ml of aprotinin, and 8 mM of calcium chloride.

22-33 (Canceled).

35. (New) The method of claim 1, further comprising suturing or anastomosing the first and second avulsed ends.

36 (New) The method of claim 35, wherein the fibrin mixture consists of fibroblast growth factor, fibrinogen, aprotinin, and calcium chloride.

37. (New) The method of claim 12, further comprising suturing or anastomosing the avulsed end of the cervical root and the avulsed end of the spinal cord.

38. (New) The method of claim 37, wherein the fibrin mixture consists of fibroblast growth factor, fibrinogen, aprotinin, and calcium chloride.